The Use of Caves as Burial Chambers on Easter Island

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Introduction

The Easter Island Anthropological Expedition, directed by George W. Gill (University of Wyoming), arrived on Easter Island in 1981 with the goal of investigating a sample of human burials from both a biological and an archaeological perspective. William Mulloy originally suggested to Gill that they form a joint physical anthropology and archaeology project to investigate the numerous human burials that were becoming exposed due both to human and natural causes. It is unfortunate that Mulloy was unable to see this expedition to the field stage, but his vision and ideas were certainly critical in defining the archaeological aspects of the project. Andrea Seelenfreund and I carried out the archaeological investigation of burial practices, with continued input and assistance from George Gill and Sergio Rapu Haoa. Claudio Cristino, of the Easter Island Research Center, provided valuable information on site locations and characteristics. A total of 21 sites was investigated during the five month field season i 1981. This paper will focus on the patterns of human burial found at nine of these sites — all cave sites located along the island's south coast (Shaw ms 1).

The south coast cave sites were selected for investigation in part because they were threatened with disturbance by human activity and by natural forces. With the increase in tourism to the island, it has become a practice for tour guides to open some of the burial caves for viewing. The cave entrances had often been sealed with beach cobbles at the time the burials were placed in them. When these cobbles were removed, the burials were subject to disturbance, either from human curiosity or attempts to rearrange the burials to enhance their dramatic appearance. It also left them vulnerable to wave action during severe storms. One of our goals during the 1981 season was to document those caves which had been opened but had not yet suffered extensive disturbance.

The South Coast Caves

The nine caves investigated along Easter Island's south coast are clustered in three locations. The easternmost group is on Koi Hoko Peninsula where two caves (13-4 and 13-6) were studied. Ahu One Makihi is located very close to the caves. The larger of the two, called Koi Hoko Cave, contained a large sample of well-preserved burials. The second cave (first identified during our study) contained a single burial.

The Oroi region in the central coast has a cluster of six caves (12-468, 12-469, 12-471a, 12-472a, 12-472b, and 12-474), all of which contained burials. The recovery of burials from closely situated caves has allowed for the analysis of family or kin-related use of an area or territory. This provides a sample to evaluate genetically-defined similarities across sites that are in close proximity to one another and to evaluate possible territorial boundaries between major groups (Gill et al. 1983; Tigner and Gill 1986).

The last area investigated included one cave (7-598) located near Ahu Akahanga. A large sample of skeletal remains had been recovered from Ahu Akahanga by George Gill and Sergio Rapu Haoa (ms) during Gill's 1979 visit to the island and from an *avanga* which was excavated during the 1981 season (Shaw ms 2). The Ahu Akahanga region was a major center of habitation and the various types of burial locations investigated in this area allow for the analysis of possible differences in burial location based on age, gender and/or kinship.

The investigation of the nine south coast caves has helped to identify a distinct pattern in how these sites were used and incorporated into the island's changing social conditions. Most of the larger caves along the coast were used for habitation, either for short term shelter or for longer occupation. The use of caves as burial chambers appears to be associated with the later periods of Easter Island occupation, during which time the birdman cult grow in importance. A sample of 27 obsidian hydration dates from five of the caves we investigated, graciously provided by Christopher Stevenson, helped to define the temporal use of the caves. The obsidian analyzed for these dates are most likely all associated with periods of cave occupation — both before and during their use as burial chambers — so the resulting dates do not directly identify when the burials were placed there.

The dates do indicate that caves were used for habitation from the 1400's through the late 1800's. Several of the caves had distinctive habitation features. An example of this can be seen at one of the Oroi caves which had its opening covered by a stone wall with a square entrance. An earth oven or *umu pae* was present outside the entrance. This cave, along with the other larger caves, had midden deposits of up to about 20 cm in thickness containing shell, faunal remains, and artifacts of obsidian and bone.

The use of caves for human burial probably began around 1700 and may have increased in frequency up until the 1860's when the first missionaries came to the island. This use of caves as burial chambers corresponds to the island-wide shift in burial practice from cremation, which was practiced during the period of image *ahu* construction, to the Late Period practice of secondary burial following a period of desiccation on exposed platforms. The cremated bones were deposited in stone-lined crypts along the back wall of the image *ahu* platforms. After, or towards the end of the period of *moai* production, a new type of stone structure, the semipyramidal *ahu*, came into use. Stevenson (1984:92) has suggested a beginning date of 1692 on the basis of obsidian hydration dates for semipyramidal construction. The semipyramidal *ahu* were often reconstructed image *ahu* with statues or fragments of statues, incorporated into their walls. A main feature of the semipyramidal *ahu* are the well-made stone crypts used for the interment of secondary burials.

As I will expand on later in the paper, I propose that the

caves were used to supplement the burial tombs in the semipyramidal *ahu*. Both the *ahu* tomb and the caves may have served as family burial chambers that were used over a period of time. Stevenson (1984:101) notes from his field observations that semipyramidal *ahu* probably contain about five tombs. It would be expected that more family tombs would be needed in large villages than would have been afforded by the semipyramidal *ahu*, and caves would have provided an expedient and local solution. The similarities between cave and semipyramidal *ahu* burial practices supports this interpretation. To illustrate this, I will first present the data on cave burials and then show how they correspond to patterns seen in semipyramidal tomb burials.

The use of caves as human burial chambers did not require much preparation of the cave. As was mentioned earlier, human corpses, possibly wrapped in mats, were first placed on small platforms for initial desiccation. The pattern observed in eight of the south coast caves indicated the human skeletal remains were collected from these platforms and bundled in *totora* reed mats. Both *totora* reed and two-twill cordage were recovered from around a number of the cave burials. These bundled individuals, or possibly several individuals, were placed directly on the cave floor, usually along the back wall or in small chambers extending off from the main cave room. The entrance to the cave was then often closed using beach cobbles.

No grave goods were found in clear association with the bundle burials. There is, however, an apparent association between the burials and fragments of red scoria *(hanihani)* and weathered pieces of white coral. In most of the caves, fist-sized pieces of red scoria and coral were scattered in the burial area. Red scoria is only found in one area of the island near the village of Hanga Roa, but this material was commonly used at image *ahu* for statue topknots and for platform decoration. Coral has also been found in the areas around *ahu* and was also probably used for decoration and/or the eyes of the moai. While it is difficult to ascertain if the red scoria and coral fragments were introduced into the caves with the burials, the fact that they do cluster in the burial area suggests that they are associated. Seelenfreund (personal communication) has noted the similar inclusion of red scoria and coral in the tombs found in the semipyramidal *ahu*. This may indicate some continuity in the symbolic use of red scoria and coral from the period of *moai* construction to the later periods.

The large cave on the Koi Hoko peninsula provides a good example of how caves were used for burial. The small entrance to Cave 13-6 is located on a southwest facing cliff wall several meters above high tide. The entrance had been modified somewhat for use of the cave for habitation. A small ledge was added outside the entrance, and is also probably associated with cave occupation. The cave interior shows considerable evidence for domestic use. A large stone platform made of *poro* or beach-worn cobbles was present along the back wall. These platforms have been noted in other caves (e.g., Mulloy and Figueroa 1963) and they are considered a feature associated with occupation activity. The Koi Hoko cave also had an extensive midden deposit.

The burials in the Koi Hoko cave were placed in bundled fashion on the floor along the wall and around the stone platform. When we found the cave, we noted that most of the skulls had been moved onto the stone platform. The heavy deterioration on one side of each of the skulls suggests that the skulls had been moved from their original burial position on the cave floor to the platform in the recent past.

Cave 13-6 was one of the more intriguing caves in the south coast sample because it contained such a large skeletal population. On first observation, 16 skulls were noted on the cave floor. After more thorough analysis of the postcranial materials, it was determined that a minimum of 20 individuals was represented in the skeletal sample. George Gill analyzed the skeletal sample and identified 10 males, 8 females, and 2 individuals of undetermined sex. The almost even numbers of males and females within the sample is consistent with the frequency seen at the other caves as well. On a basic level, this can be interpreted to mean that gender was not a consideration when selecting caves as burial chambers. The age of the individual also does not seem to be a criterion for the selection of interment location except in the case of infants and young children. The age distribution ranges from infant to old age although the young are significantly underrepresented. The low number of infants and young children fro the cave sites does not reflect a normal mortality curve (Weiss 1973) which would have a much higher infant mortality indicated. This could suggest that the burials of young individuals may have been treated differently than those of other individuals or it may be due to a greater deterioration of small skeletal elements, both on the desiccation platforms and in the damp cave environments. Young individuals are poorly represented in the semipyramidal *ahu* tombs as well.

Any patterns observed within the skeletal samples from the cave sites should be considered with caution because of the relatively small sample sizes involved. But the general pattern does suggest that people were interred in the caves without regard to sex or age, except possibly for young individuals. This pattern is also seen in the semipyramidal tomb populations, and may suggest that entry into the burial tombs or caves was based on kin relations.

Before moving to a discussion of the wider implications of cave burial practices, I want to describe the one cave that did not fit the otherwise very consistent pattern. This is a small cave (12-469) in the Oroi sample which contained two primary burials. The better-preserved burial was of an adult male between the ages of 40 and 55 years (George Gill, personal communication) which was placed on the cave floor along the back wall. The burial was positioned in a ventral, extended position with its head to the east. Remnants of *totora* reed mats with two-twill cordage was found around the bones. The burial was covered with large, flat beach cobbles, which appear to have been placed originally to create a V-shaped open tomb for the body. When we discovered this cave, the skull was sitting on the top of these cobbles, but the deterioration on one side and the *totora* reed inside the skull suggested that it had been removed only recently from its original articulated position and placed on top of the rocks.

The second burial in this cave was relatively poorly preserved, due to its closer proximity to the cave opening. It

is a primary, extended burial of a youth of undetermined sex between the ages of 7 and 9 (Gill, personal communication). This burial seems to have been treated in a very similar manner to the adult burial, and again, the evidence suggests that the skull had been placed on top of the rock covering recently.

The pattern of primary extended burial for these burials suggests that they may date to the period after the arrival of the missionaries in 1864. The missionaries probably discouraged the open exposure of the deceased on platforms; this may have caused the islanders to switch to primary interments. The continued use of caves and *totora* reed mats may, however, indicate the islanders' attempts to continue past practices as opposed to changing to formal Christian cemeteries. Métraux (1940:115) mentions that the use of caves for burial may have continued into the 20th century.

Conclusions

The use of coastal caves as burial chambers follows very closely the pattern observed in the semipyramidal *ahu* tombs. The burial assemblages found in both contexts reflects a pattern consistent with what would be expected for family tombs that had used over a period of years. Both the *ahu* tombs and the caves could be opened and family burials added when needed.

The broad range in age and sex represented in the cave and *ahu* skeletal samples can tentatively be interpreted as a natural mortality pattern, with the sole exception of the low frequency of the very young in the samples. The shift in burial practice from cremation to secondary, bundle burials also links the use of *ahu* tombs and caves. Although more dates are needed to establish the time at which caves were first used as burial chambers, the similarities in the range of obsidian hydration dates for both burial locations suggests there is at least a substantial period of overlap in their use. The observation of *totora* reed mats and fragments of red scoria and white coral in both contexts also supports contemporaneous use for *ahu* tombs and caves.

The use of semipyramidal *ahu* tombs and caves as family burial chambers during Easter Island's later periods reflects something about the social reorganization that was occurring at the time. The shift from cremated to secondary bundle burial may have had more to do with the serious depletion of trees on the island (Bahn and Flenley 1992) than with an ideological shift. But the location of burials in the restructured semipyramidal *ahu* and in caves clustered close to major *ahu* suggest that a sense of place was still important and that the village center remained the focal point for preserving family ties. The burial tombs—whether in the *ahu* or in caves—would have been associated with a special hereditary line over at least several generations. This suggests that conditions on Easter Island during the 1700's and early 1800's, with all the social changes and environmental pressures, saw the perpetuation of the importance of kinship and association with place—an association that was most dramatically portrayed during the period of image *ahu* construction.

The 1981 expedition made a major contribution to Easter Island prehistory with its focus on burial practices. Up until that time, burials had been recorded when they were encountered during *ahu* restoration or cave exploration. But an island-wide study of burial practices was needed to begin to identify how the treatment of the dead over time reflected changing social conditions. The nine cave sites discussed here, and the 21 sites studied by the 1981 team, provide us with the beginnings of a detailed look at Easter Island burial practices. The future consideration of burials from both an archaeological and biological perspective will continue to illuminate aspects of Easter Island prehistory, much as William Mulloy knew it would.

Acknowledgments

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